

Serial No.: 10/522,055

Office Action dated: February 22, 2007

Amendment dated: August 22, 2007

IN THE CLAIMS:

Please amend claims 1-3, 5-6, 9-10, and 12-17 as follows.

1. (Currently Amended) A method of non-invasive exploration for assessing the digestive ~~motricity and/or motility~~ and transit of a human or animal subject, comprising:

    said subject swallowing an ingestible transmitting element which is non-digestible containing a transmission means transmitting at a given fixed frequency;

    measuring, at a given time using at least three reception means distributed around said subject's trunk, the phase shift of the frequency transmitted by said transmission means relative to a reference phase to obtain three phase-shift measurements;

    determining, by triangulation on the basis of the three phase-shift measurements, the 3D position of said transmitting element;

    defining, according to the 3D position of said transmitting element, a data for the an assessment of the digestive ~~motricity and/or motility~~ and transit.

2. (Currently Amended) The method according to claim 1, characterized in that the three phase-shift measurements corresponding to the phase shift are stored in a memory means.

3. (Currently Amended) The method according to claim 1,

characterized in that the receiving-reception means are placed around ~~the~~an abdominal belt.

4. (Previously Presented) The method according to claim 1,

characterized in that a series of position measurements are made which are spread over time.

5. (Currently Amended) The method according to claim 1,

characterized in that a position reference measurement is made when the transmitting element is in the mouth of the subject, before ~~he~~the subject swallows it.

6. (Currently Amended) The method according to claim

~~1~~claim 2, characterized in that ~~the~~a power supply of the transmitting element is triggered at given times and the corresponding phase-shift measurements at each given time are stored in the memory means.

7. (Previously Presented) The method according to claim 1, characterized in that the amplitude of the transmission frequency of the transmission means is modulated as a function of the amplitude of a signal picked up by a sensor included in the transmitting element, said sensor being able to pick up a signal representing a physiological characteristic.

8. (Previously Presented) The method according to claim 1, characterized in that said subject ingests several transmitting elements over a period of time, each transmitting element having a characteristic frequency.

9. (Currently Amended) A non-invasive exploration system for assessing the digestive motility and/or motility and transit of a human or animal subject, in particular for the implementation of the method according to claim 1, characterized by: ~~on the one hand:~~

~~an ingestible transmitting element which cannot be digested by said subject containing a transmission means transmitting at a given fixed frequency;~~  
~~and on the other hand:~~

receiving means comprising at least three receivers intended to be placed around the trunk of said subject, each receiver being able to measure at a given time the phase shift of said transmission frequency relative to a reference phase;

means for processing and analyzing the three phase-shift measurements made by said at least three receivers which are able to determine, by triangulation, ~~the~~<sup>the</sup> 3D position of said transmitting element.

10. (Currently Amended) The system according to claim 9, characterized in that it also comprises a means for storing in ~~the~~<sup>the</sup> a memory the phase-shift measurements made by ~~the~~ said at least three receivers at a given time.

11. (Previously Presented) The system according to claim 9, characterized by a high transmission frequency.

12. (Currently Amended) The system according to claim 10, characterized in that the transmitting element comprises an integrated power supply means.

13. (Currently Amended) The system according to claim 9, characterized in that the transmitting element comprises an induced power supply means.

Serial No.: 10/522,055

Office Action dated: February 22, 2007

Amendment dated: August 22, 2007

14. (Currently Amended) The system according to claim 9,

characterized in that said at least three the receivers are distributed on a belt which is able to be fixed on the trunk of the subject.

15. (Currently Amended) The system according to claim 14,

characterized in that the belt also comprises a means for the induction of the-a power supply of said transmitting element.

16. (Currently Amended) The system according to claim 14,

characterized in that the analysis and processing means include a card comprising means for analogue-to-digital conversion of the signals picked up and memory means common to the said at least three receivers and arranged on the belt.

17. (Currently Amended) The system according to claim 9,

characterized by a means for connecting the-a memory means to the processing and analysis means and for transferring the data relating to the phase shifts measured.

Serial No.: 10/522,055

Office Action dated: February 22, 2007

Amendment dated: August 22, 2007

18. (Previously Presented) The system according to claim 9, characterized in that the transmitting element comprises a sensor which is able to pick up a signal representing a physiological characteristic, the amplitude of the frequency transmitted by the transmission means being able to be modulated as a function of the amplitude of the signal picked up by said sensor.

19. (Previously Presented) The system according to claim 9, characterized in that it comprises several transmitting elements intended to be ingested by said subject over a period of time.